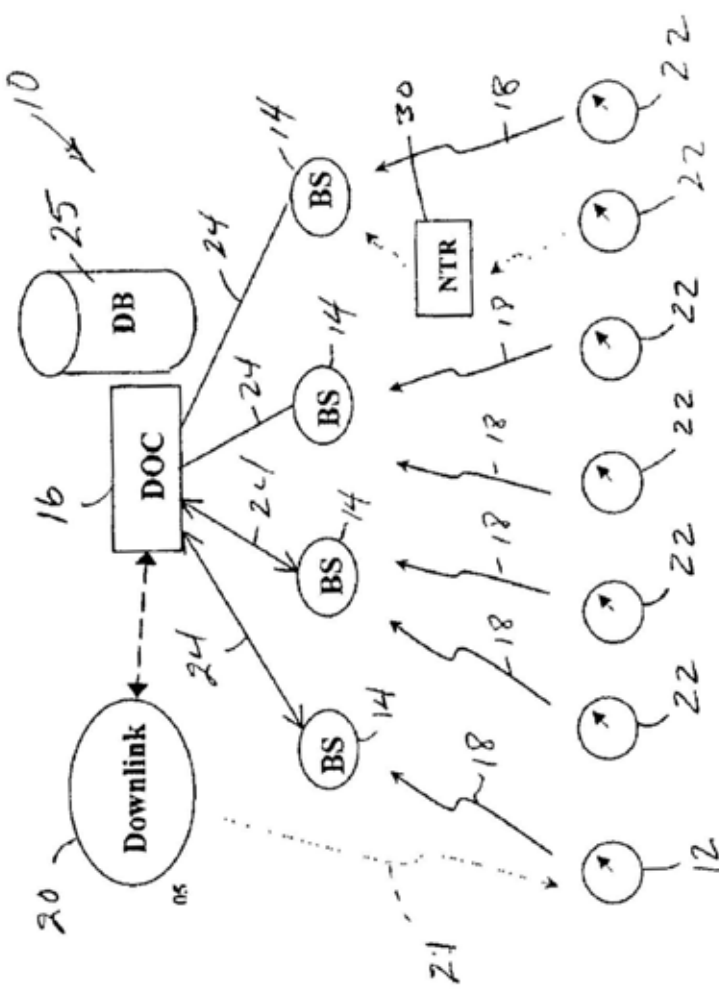


EXHIBIT C

PART 1

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
<p>Claim 1</p> <p>1. A base station configuration in a two-way communication interactive video network having network hub switching center means for routing communications from and to a plurality of subscriber units comprising:</p>	<p>Sensus FlexNet and compatible equipment</p> <p>"The Sensus FlexNet System is a wide area Advanced Metering Infrastructure (AMI) system that provides the ability to read water, gas and electric meters with a common AMI platform. The FlexNet system is designed around the central concepts of Simplicity, Flexibility, and Reliability. The system supports one-way radio frequency (RF) transmission for water and gas meters, and offers two-way RF functionality for electric meters, including on-demand readings, remote disconnects/reconnects, and load shedding."</p>  <p>"The network also includes a Data Operations Center (DOC) that communicates with all the Base Stations, monitors their operation and collects metering data messages</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p>Sensus FlexNet and compatible equipment from them. The DOC may also be communicatively coupled to a paging network, or other wireless network, for sending downlink commands to the two-way meter modules."²</p> <p>"Metering data messages are collected by a network of receiver Base Stations. The reception range of each Base Station is typically over 5 miles in urban areas, allowing sparse infrastructure deployment for a wide variety of metering data collection applications."³</p> <p>"The Regional Network Interface (RNI) is the data storage and processing center for the Sensus FlexNet system. One of the primary functions of the RNI is to receive and store data forwarded from the Tower Gateway Basestation (TGB). Once the data is received at the RNI, the utility can then use the data to assist them in improving efficiency throughout the utility. A major feature of the RNI is that it was designed to operate with standalone water or gas services and is also capable of operating in a combination utility environment that consists of water, gas and electric services. The RNI provides the necessary application to maximize the benefits of data collection."⁴</p> <p>"USA Mobility, Inc. announced that it has entered into an alliance with Advanced Metering Data Systems, LLC and Sensus Metering Systems to provide utility meter monitoring services over a two-way narrowband personal communications services (NPCS) network. Under the agreement, the Company will sell one of its NPCS licenses to Advanced Metering Data Systems for \$1.5 million and the opportunity to receive an additional \$3.5 million in future royalty payments based upon a percentage of the monitoring revenues derived from Advanced Metering Data's use of the NPCS license. The Company also will receive a right to acquire a future equity interest in AMDS. Additionally, USA Mobility will provide Advanced Metering Data Systems with ongoing network services, including turnkey system build-out, maintenance, repair and central monitoring. The agreement also provides Advanced Metering Data Systems with access to the Company's tower locations throughout North America where the AMR fixed network receivers will be installed."⁵</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="235 527 269 1073">Sensus FlexNet and compatible equipment</p> <p data-bbox="269 233 781 1367"> "The FlexNet system's two-way features include demand reads, kWh and actual voltage, and programmable read interval, low-voltage and breaker re-closure warnings, power fail alarm, and meter functions that are accessible from the Internet. Additional benefits include remote meter disconnect/reconnect, 15-minute demand resets, real-time clock calibration for top-of-the-hour reads, TOU billing and consumption correlation, energy management programs, text and rate change notification, load shed and restore, and real-time data for management and billing. The FlexNet system also has gas and water modules for combo utility applications. "Patented AMDS Connect wireless network architecture coupled with the latest generation of Sensus iCon meters has already been demonstrated to be a winning combination in several utility operating environments, including some of the most varied and unforgiving terrains in the country," added Britton Sanderford, President and CEO of AMDS. "The FlexNet system builds on that foundation to provide the most accurate and reliable meter reading system available in today's electric utility industry," Sanderford concluded. </p> <p data-bbox="813 233 1292 1367"> Additional information disclosing this claim element can be found in "Sensus FlexNet Annual Maintenance Agreement AMR-454-R2," (EON-SENS 000001-2); "FlexNet Network Portal – FNP AMI-460," (EON-SENS 000003); "Model 510X Non-Pit Set AMR 326-R5," (EON-SENS 000004); "Model 520X - Pit Set AMR 327-R4," (EON-SENS 000005); "regional Network Interface AMI-420," (EON-SENS 000006); "Tower Gateway Base Station AMR 452-R1," (EON-SENS 000007); "FlexNet System Specifications AMR-456-R1," (EON-SENS 000008-9); "FlexNet Technology Overview," (EON-SENS 000010-13); "FlexNet System," (EON-SENS 000014-21); "Technical Report," (EON-SENS 000022); "FlexNet with AMDS Connect Promises Increased Productivity," (EON-SENS 000023-24); "Advanced Metering Data Systems," (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety. </p> <p data-bbox="1325 233 1435 1367"> The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is </p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	Sensus FlexNet and compatible equipment
subscriber units dispersed at various locations within a predetermined base station geographic area,	<p>not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the "530 Patent") and U.S. Patent 7,012,546 (the "546 Patent"), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p> <p>"A two-way meter module is capable of transmitting metering data air messages on demand (upon receiving an appropriate wireless command) and may also be conveniently programmed to transmit at specific times by maintaining a real-time clock synchronized by the wireless downlink channel. Two-way meter modules also receive, decode and execute other commands such as: programming meter parameters, displaying messages or alerts on the meter's display, disconnecting and reconnecting power to the utility meter's load. FIG. 2 depicts a block diagram of a particular embodiment of a two-way meter module, in which the elements added to a one-way meter module (transmitter described herein), in order to produce a two-way meter module, include a paging receiver and decoder. The basic transmitter apparatus is described further in detail separately below."⁷</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<div data-bbox="245 527 277 1073">Sensus FlexNet and compatible equipment</div> <div data-bbox="321 443 976 1339"> <p>The diagram illustrates a system architecture for meter communication. A central 'Two-way meter module' (130) is shown, which includes a 'Paging Receiver' (131), a 'POC/SAG/Flex Decoder' (132), and a 'Transmitter' (133). This module is connected to two 'Meter' units (134 and 135) via a central processing unit (136). Additionally, a 'One-way meter module' (140) is shown, which includes a 'Transmitter' (141) connected to a 'Meter' unit (142).</p> </div> <div data-bbox="1036 233 1425 1360"> <p>“USA Mobility, Inc. announced that it has entered into an alliance with Advanced Metering Data Systems, LLC and Sensus Metering Systems to provide utility meter monitoring services over a two-way narrowband personal communications services (NPCS) network. Under the agreement, the Company will sell one of its NPCS licenses to Advanced Metering Data Systems for \$1.5 million and the opportunity to receive an additional \$3.5 million in future royalty payments based upon a percentage of the monitoring revenues derived from Advanced Metering Data’s use of the NPCS license. The Company also will receive a right to acquire a future equity interest in AMDS. Additionally, USA Mobility will provide Advanced Metering Data Systems with ongoing network services, including turnkey system build-out, maintenance, repair and central monitoring. The agreement also provides Advanced Metering Data Systems</p> </div>

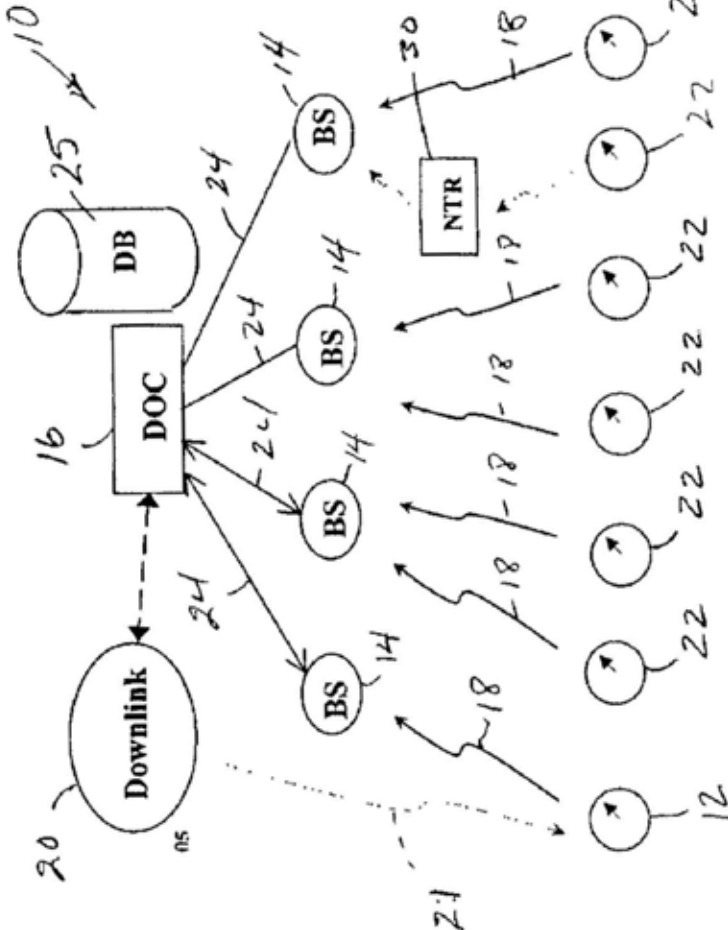
Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p>Sensus FlexNet and compatible equipment with access to the Company's tower locations throughout North America where the AMR fixed network receivers will be installed."⁸</p> <p>"Sensus FlexNet SmartPoint model 520X is a pit set radio signal device which permits off site meter reading via licensed radio signal in a pit set or vault environment. The model 520 is designed to maximize performance in an RF environment. In order to achieve maximum performance, the model 520 must be installed through the pit lid. The FlexNet SmartPoint interfaces with any compatible absolute encoder equipped utility meter and operates in conjunction with a Sensus FlexNet system. The Sensus FlexNet System eliminates a number of meter reading problems such as lockouts, curbside reading estimates, estimated bills and errors associated with manual meter reading methods. The FlexNet SmartPoint is available in one and two port models. This feature provides enhanced cost effective AMI where multiple meter installations exist."⁹</p> <p>Additional information disclosing this claim element can be found in "Sensus FlexNet Annual Maintenance Agreement AMR-454-R2," (EON-SENS 000001-2); "FlexNet Network Portal – FNP AMI-460," (EON-SENS 000003); "Model 510X Non-Pit Set AMR 326-R5," (EON-SENS 000004); "Model 520X - Pit Set AMR 327-R4," (EON-SENS 000005); "regional Network Interface AMI-420," (EON-SENS 000006); "Tower Gateway Base Station AMR 452-R1," (EON-SENS 000007); "FlexNet System Specifications AMR-456-R1," (EON-SENS 000008-9); "FlexNet Technology Overview," (EON-SENS 000010-13); "FlexNet System," (EON-SENS 000014-21); "Technical Report," (EON-SENS 000022); "FlexNet with AMDS Connect Promises Increased Productivity," (EON-SENS 000023-24); "Advanced Metering Data Systems," (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	Sensus FlexNet and compatible equipment
local base station repeater cell means for communicating with identified individual subscriber units within a local base station geographic area associated with said local base station repeater cell means, said local base station repeater cell means further comprising:	<p>not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the "'530 Patent") and U.S. Patent 7,012,546 (the "'546 Patent"), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p> <p>"Each receiver Base Station 02 is able to receive and decode DSSS encoded signals (air messages) generated by the meter modules. The bandwidth of the DSSS signal is approximately 2 MHz. Base Stations 02 can be optimized to receive signals in any radio frequency range between 800 MHz and 1 GHz, including the 902-928 MHz Industrial, Scientific, and Medical (ISM) band allocated by the FCC for unlicensed use. In a preferred embodiment, the data collection network operates in the ISM band under the rules for unlicensed operation (Part 15 of the FCC Rules), and requires no licensing for any portion of its wireless uplink channel."¹⁰</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="240 533 272 1075">Sensus FlexNet and compatible equipment</p>  <p data-bbox="1071 247 1432 1360">"Level 2: Space diversity is implemented to adjust network capacity, by controlling the amount of Base Stations used in order to provide coverage to specified meter population and metering data application in a specified geographical area. The initial phase of planning network coverage includes optimal selection of the number and locations of Base Stations to be deployed in the specified area. When a Base Station covers a large area and the meter module density or air message frequency requirements continuously increase, at some stage the farthest meter modules would endure interference from the closer meter modules, and message reception probability from the farthest meter modules will decrease. Base Stations may be added at appropriate locations in the same geographic area, in order to increase network capacity</p>

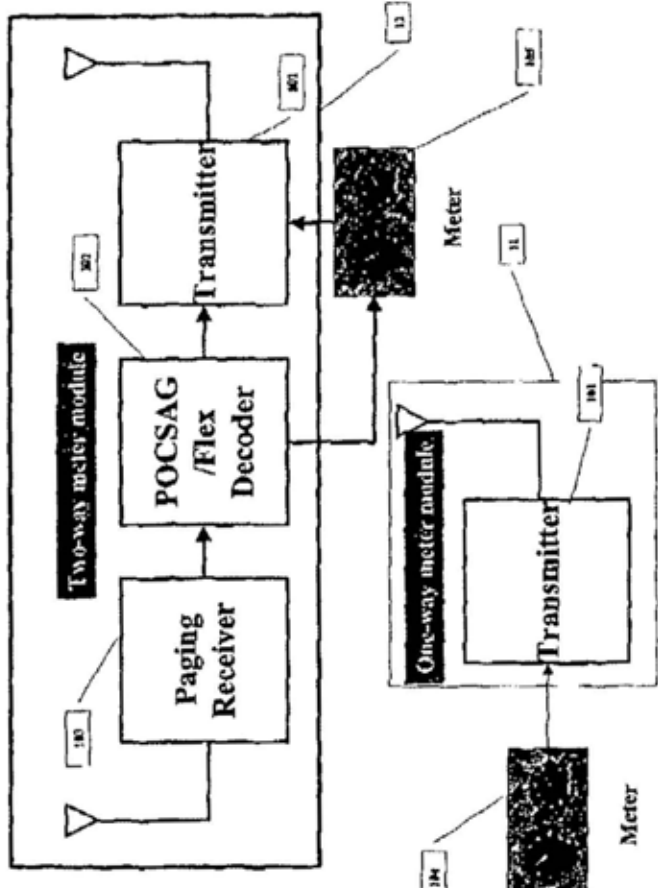
Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p>Sensus FlexNet and compatible equipment</p> <p>and message reception rate. Adding Base Stations reduces the effective range between each meter module to be deployed and the Base Station closest to it, so that more meter modules or potential meter module locations are within a range of high air-message reception probability. Thus, the placement of additional Base Stations in the same geographic area, without any other change in the network or the meter modules, will in itself increase overall network capacity.”¹¹</p> <p>Additional information disclosing this claim element can be found in “Sensus FlexNet Annual Maintenance Agreement AMR-454-R2,” (EON-SENS 000001-2); “FlexNet Network Portal – FNP AMI-460,” (EON-SENS 000003); “Model 510X Non-Pit Set AMR 326-R5,” (EON-SENS 000004); “Model 520X - Pit Set AMR 327-R4,” (EON-SENS 000005); “regional Network Interface AMI-420,” (EON-SENS 000006); “Tower Gateway Base Station AMR 452-R1,” (EON-SENS 000007); “FlexNet System Specifications AMR-456-R1,” (EON-SENS 000008-9); “FlexNet Technology Overview,” (EON-SENS 000010-13); “FlexNet System,” (EON-SENS 000014-21); “Technical Report,” (EON-SENS 000022); “FlexNet with AMDS Connect Promises Increased Productivity,” (EON-SENS 000023-24); “Advanced Metering Data Systems,” (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the “530 Patent”) and U.S. Patent 7,012,546 (the “546 Patent”), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
<p>Claim 1</p> <p>base station data processing and transmission means for transmitting to a set of said local subscriber units contained within said local base station geographic area associated with said local base station repeater cell means and receiving from a subset of said local set of subscriber units multiplexed synchronously related digital data messages of variable lengths for point-to-point communication between said local base station repeater cell means and said subset of said local subscriber units,</p>	<p>Sensus FlexNet and compatible equipment</p> <p>“Each receiver Base Station 02 is able to receive and decode DSSS encoded signals (air messages) generated by the meter modules. The bandwidth of the DSSS signal is approximately 2 MHz. Base Stations 02 can be optimized to receive signals in any radio frequency range between 800 MHz and 1 GHz, including the 902 928 MHz Industrial, Scientific, and Medical (ISM) band allocated by the FCC for unlicensed use. In a preferred embodiment, the data collection network operates in the ISM band under the rules for unlicensed operation (Part 15 of the FCC Rules), and requires no licensing for any portion of its wireless uplink channel.”¹²</p> <p>“Level 5 (highest level of air-message capacity): In a one-way data collection network, an additional, higher level of capacity may be reached by adding a downlink channel and deploying transceivers rather than transmitter meter modules. A two-way system has the inherent potential to be more efficient with radio airtime resource, since field units may be synchronized to a central clock, allowing transmission according to allocated time slots. The higher the rate of two-way meter modules in the metered population, the higher the capacity increase provided by adding the downlink channel. The wireless data collection network described above may be scaled up from one-way (data collection only) to two-way by connecting the DOC to a wireless downlink channel in a modular way as described above. In addition, the measures described in levels 2 to 4 above may be implemented in a two-way network as well in order to further increase network capacity.”¹³</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="240 525 272 1071">Sensus FlexNet and compatible equipment</p>  <p data-bbox="1031 283 1323 1354">“In a preferred embodiment of a two-way metering data network, both one-way (transmitter) and two-way (transceiver) meter modules operate on the same network. Transceivers can be interrogated for data at the time that the data is required, thus eliminating the need for repeated transmissions, which are required in a one-way network in order to maintain a certain level of data latency. In addition, by synchronizing all transceiver modules to one central real-time clock, a time slot for transmission may be allocated and specified for each transceiver in a coverage area, thereby increasing the efficiency of network airtime usage.”</p> <p data-bbox="1356 294 1421 1354">“The transmitted message is illustrated in FIG. 7 as including a message header 94 which includes the identification (ID) of the meter module which has calculated the</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="235 525 267 1071">Sensus FlexNet and compatible equipment</p> <p data-bbox="267 630 300 1344">data, and then includes the data itself, as indicated at 96.”¹⁴</p> <div data-bbox="324 378 665 1323"> <p data-bbox="324 420 357 630">MESSAGE FORMAT:</p> <p data-bbox="389 945 422 1155">MESSAGE TYPE (INTERVAL DATA MSG)</p> <p data-bbox="454 1008 487 1092">METER MODULE ID</p> <p data-bbox="519 861 552 1029">CHECKSUM</p> <p data-bbox="584 630 617 735">P1</p> <p data-bbox="617 630 649 735">P2</p> <p data-bbox="649 630 682 735">P3</p> <p data-bbox="682 630 714 735">T1</p> <p data-bbox="714 630 747 735">T2</p> <p data-bbox="747 630 779 735">T3</p> <p data-bbox="779 630 812 735">T4</p> <p data-bbox="812 630 844 735">T5</p> <p data-bbox="844 630 876 735">T6</p> <p data-bbox="876 630 909 735">T7</p> <p data-bbox="909 630 941 735">T8</p> <p data-bbox="941 630 974 735">T9</p> <p data-bbox="974 630 1006 735">T10</p> <p data-bbox="1006 630 1039 735">T11</p> <p data-bbox="1039 630 1071 735">T12</p> <p data-bbox="1071 630 1104 735">T13</p> <p data-bbox="1104 630 1136 735">T14</p> <p data-bbox="1136 630 1169 735">T15</p> <p data-bbox="1169 630 1201 735">T16</p> <p data-bbox="1201 630 1234 735">T17</p> <p data-bbox="1234 630 1266 735">T18</p> <p data-bbox="1266 630 1299 735">T19</p> <p data-bbox="1299 630 1331 735">T20</p> <p data-bbox="1331 630 1364 735">T21</p> <p data-bbox="1364 630 1396 735">T22</p> <p data-bbox="1396 630 1429 735">T23</p> <p data-bbox="1429 630 1461 735">T24</p> <p data-bbox="1461 630 1494 735">T25</p> <p data-bbox="1494 630 1526 735">T26</p> <p data-bbox="1526 630 1559 735">T27</p> <p data-bbox="1559 630 1591 735">T28</p> <p data-bbox="1591 630 1624 735">T29</p> <p data-bbox="1624 630 1624 735">T30</p> <p data-bbox="1656 630 1624 735">T31</p> <p data-bbox="1688 630 1624 735">T32</p> <p data-bbox="1721 630 1624 735">T33</p> <p data-bbox="1753 630 1624 735">T34</p> <p data-bbox="1786 630 1624 735">T35</p> <p data-bbox="1818 630 1624 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data-bbox="9581 630 1624 735">T275</p> <p data-bbox="9614 630 1624 735">T276</p> <p data-bbox="9646 630 1624 735">T277</p> <p data-bbox="9679 630 1624 735">T278</p> <p data-bbox="9711 630 1624 735">T279</p> <p data-bbox="9744 630 1624 735">T280</p> <p data-bbox="9776 630 1624 735">T281</p> <p data-bbox="9808 630 1624 735">T282</p> <p data-bbox="9841 630 1624 735">T283</p> <p data-bbox="9873 630 1624 735">T284</p> <p data-bbox="9906 630 1624 735">T285</p> <p data-bbox="9938 630 1624 735">T286</p> <p data-bbox="9971 630 1624 735">T287</p> <p data-bbox="10003 630 1624 735">T288</p> <p data-bbox="10036 630 1624 735">T289</p> <p data-bbox="10068 630 1624 735">T290</p> <p data-bbox="10101 630 1624 735">T291</p> <p data-bbox="10133 630 1624 735">T292</p> <p data-bbox="10166 630 1624 735">T293</p> <p data-bbox="10198 630 1624 735">T294</p> <p data-bbox="10231 630 1624 735">T295</p> <p data-bbox="10263 630 1624 735">T296</p> <p data-bbox="10296 630 1624 735">T297</p> <p data-bbox="10328 630 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735">T367</p> <p data-bbox="12602 630 1624 735">T368</p> <p data-bbox="12634 630 1624 735">T369</p> <p data-bbox="12667 630 1624 735">T370</p> <p data-bbox="12699 630 1624 735">T371</p> <p data-bbox="12732 630 1624 735">T372</p> </div>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p>Sensus FlexNet and compatible equipment covers a large area and the meter module density or air message frequency requirements continuously increase, at some stage the farthest meter modules would endure interference from the closer meter modules, and message reception probability from the farthest meter modules will decrease. Base Stations may be added at appropriate locations in the same geographic area, in order to increase network capacity and message reception rate. Adding Base Stations reduces the effective range between each meter module to be deployed and the Base Station closest to it, so that more meter modules or potential meter module locations are within a range of high air-message reception probability. Thus, the placement of additional Base Stations in the same geographic area, without any other change in the network or the meter modules, will in itself increase overall network capacity.”¹⁶</p> <p>Additional information disclosing this claim element can be found in “Sensus FlexNet Annual Maintenance Agreement AMR-454-R2,” (EON-SENS 000001-2); “FlexNet Network Portal – FNP AMI-460,” (EON-SENS 000003); “Model 510X Non-Pit Set AMR 326-R5,” (EON-SENS 000004); “Model 520X - Pit Set AMR 327-R4,” (EON-SENS 000005); “regional Network Interface AMI-420,” (EON-SENS 000006); “Tower Gateway Base Station AMR 452-R1,” (EON-SENS 000007); “FlexNet System Specifications AMR-456-R1,” (EON-SENS 000008-9); “FlexNet Technology Overview,” (EON-SENS 000010-13); “FlexNet System,” (EON-SENS 000014-21); “Technical Report,” (EON-SENS 000022); “FlexNet with AMDS Connect Promises Increased Productivity,” (EON-SENS 000023-24); “Advanced Metering Data Systems,” (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the “530 Patent”) and U.S. Patent 7,012,546 (the “546 Patent”), each of which are hereby incorporated by reference. Not all of the material disclosed in these</p>

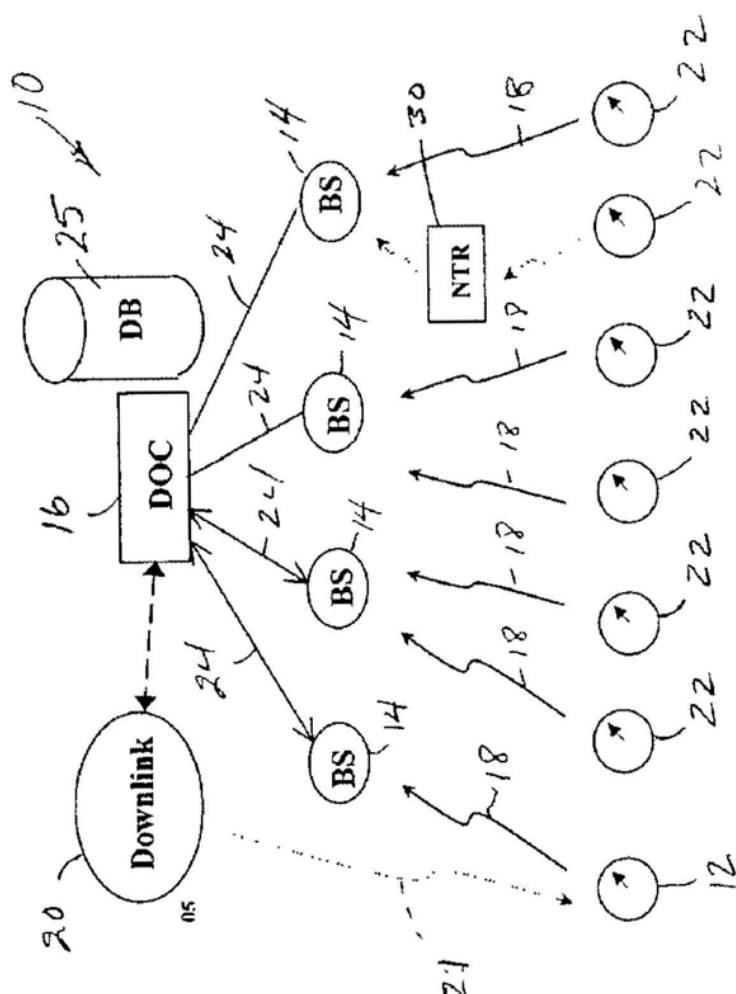
Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	Sensus FlexNet and compatible equipment
reception means for receiving and processing data messages from said set of local subscriber units comprising	<p>patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p> <p>"Metering data messages are collected by a network of receiver Base Stations. The reception range of each Base Station is typically over 5 miles in urban areas, allowing sparse infrastructure deployment for a wide variety of metering data collection applications."¹⁷</p> <p>Additional information disclosing this claim element can be found in "Sensus FlexNet Annual Maintenance Agreement AMR-454-R2," (EON-SENS 000001-2); "FlexNet Network Portal – FNP AMI-460," (EON-SENS 000003); "Model 510X Non-Pit Set AMR 326-R5," (EON-SENS 000004); "Model 520X - Pit Set AMR 327-R4," (EON-SENS 000005); "regional Network Interface AMI-420," (EON-SENS 000006); "Tower Gateway Base Station AMR 452-R1," (EON-SENS 000007); "FlexNet System Specifications AMR-456-R1," (EON-SENS 000008-9); "FlexNet Technology Overview," (EON-SENS 000010-13); "FlexNet System," (EON-SENS 000014-21); "Technical Report," (EON-SENS 000022); "FlexNet with AMDS Connect Promises Increased Productivity," (EON-SENS 000023-24); "Advanced Metering Data Systems," (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the "530 Patent") and U.S. Patent 7,012,546 (the "546 Patent"), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based</p>

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	Sensus FlexNet and compatible equipment upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.
a local remote receiver disposed within one of a plurality of cell subdivision site partitioned from said local base station geographic area associated with said local base station repeater cell means, said plurality of cell subdivision sites dispersed over said local base station geographic area, each local remote receiver adapted for receiving-only low power digital messages transmitted from said local subscriber units within range of said local remote receiver, and	“According to a particular embodiment, in some cases, a cost-efficient means for expanding network coverage is adding Network Transceiver/Repeater devices (NTR) in order to provide coverage for meter modules experiencing poor or no Base Station coverage. This means provides more flexibility to the network operator by creating another option for providing coverage to a limited geographic area. NTR cost of deployment and maintenance is significantly lower than that of a Base Station. Therefore, besides being a cost effective solution to poor coverage, it also may cost justify the enhancement of a network's coverage to areas of low population density, thus extending the reach of its automated metering data collection system. The deployment of NTR devices does not require the network operator to perform any changes in any of the other elements of the network infrastructure.” ¹⁸

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="235 525 267 1071">Sensus FlexNet and compatible equipment</p>  <p data-bbox="1071 294 1169 1344">“The transmitted message is illustrated in FIG. 7 as including a message header 94 which includes the identification (ID) of the meter module which has calculated the data, and then includes the data itself, as indicated at 96.”¹⁹</p>

Claim Chart: U.S. Patent 5,481,546

<p>Claim 1</p> <p>Claim Language</p>	<p>Accused System</p> <p>Sensus FlexNet and compatible equipment</p>
<div data-bbox="306 390 686 892"> </div> <div data-bbox="686 390 1005 892"> <p>FIG 7</p> </div> <div data-bbox="686 892 1005 1879"> <p>“The Tower Gateway Base Station (TGB) is a one-way application and receives transmission from the FlexNet SmartPoint in predetermined intervals. TGB’s are strategically located within an area to insure coverage requirements are achieved. The SmartPoint units can be housed on typical communications towers and/or on a utility’s property should they meet the criteria for installation. Once the data is received at the TGB, the information is then forwarded to the Regional Network Interface (RNI) typically located at the utility.”²⁰</p> <p>“The features incorporated in the TGB provide the industry’s most reliable data collection system. Incorporated in the design, the system provides assurance that data will not be lost and can also be held for extended periods of time. One of the primary features of the TGB is its ability to store thirty (30) days worth of data. This feature provides the ability for the end user to access the tower should an extended outage occur. The TGB also incorporates other alternative communication methods in the chance that the primary communication link is disabled. In addition, the TGB provides an eight (8) hour battery backup in case the primary source of power is interrupted. In the case of multiple TGB sites in the coverage area, neighboring TGBs can accept and process data if required.”²¹</p> <p>“The FlexNet Network Portal (FNP) is an optional receive and transmit unit that</p> </div>	

Claim Chart: U.S. Patent 5,481,546

Claim Language	Accused System
Claim 1	<p data-bbox="235 527 269 1073">Sensus FlexNet and compatible equipment</p> <p data-bbox="272 231 889 1360">provides simple store and forward messaging from Sensus FlexNet SmartPoints. Units are strategically placed after the complete deployment of FlexNet Tower Gateway Base Stations (TGB). Once areas within a network have been identified to have little or no coverage, the FNP provides an economical solution within an existing network. Messages are collected at the FNP and transmitted to the TGB over a primary licensed frequency to assure that coverage is provided within a designated service territory. Operation: The FNP operates within a deployed network to assure that messages are received at the Regional Network Interface (RNI). The FNP typically can support up to four hundred (400) FlexNet SmartPoints within a serviceable range of an installed network. RF transmissions on the Sensus primary licensed frequency allow the FNP to receive and transmit messages from Sensus FlexNet SmartPoints to the TGB. By incorporating RF transmission as the backhaul communications method, the utility has greater flexibility in installation options. Numerous locations such as light poles, buildings or existing utility structures with access to AC power (110-240 VAC) provide excellent locations for FNP installations. Flexible antenna options can be utilized to maximize performance. The FNP incorporates a battery back up power source should a power outage occur which allows for seamless operation.²²</p> <p data-bbox="927 231 1435 1360">“Level 2: Space diversity is implemented to adjust network capacity, by controlling the amount of Base Stations used in order to provide coverage to specified meter population and metering data application in a specified geographical area. The initial phase of planning network coverage includes optimal selection of the number and locations of Base Stations to be deployed in the specified area. When a Base Station covers a large area and the meter module density or air message frequency requirements continuously increase, at some stage the farthest meter modules would endure interference from the closer meter modules, and message reception probability from the farthest meter modules will decrease. Base Stations may be added at appropriate locations in the same geographic area, in order to increase network capacity and message reception rate. Adding Base Stations reduces the effective range between each meter module to be deployed and the Base Station closest to it, so that more meter modules or potential meter module locations are within a range of high air-message reception probability. Thus, the placement of additional Base Stations in the same</p>

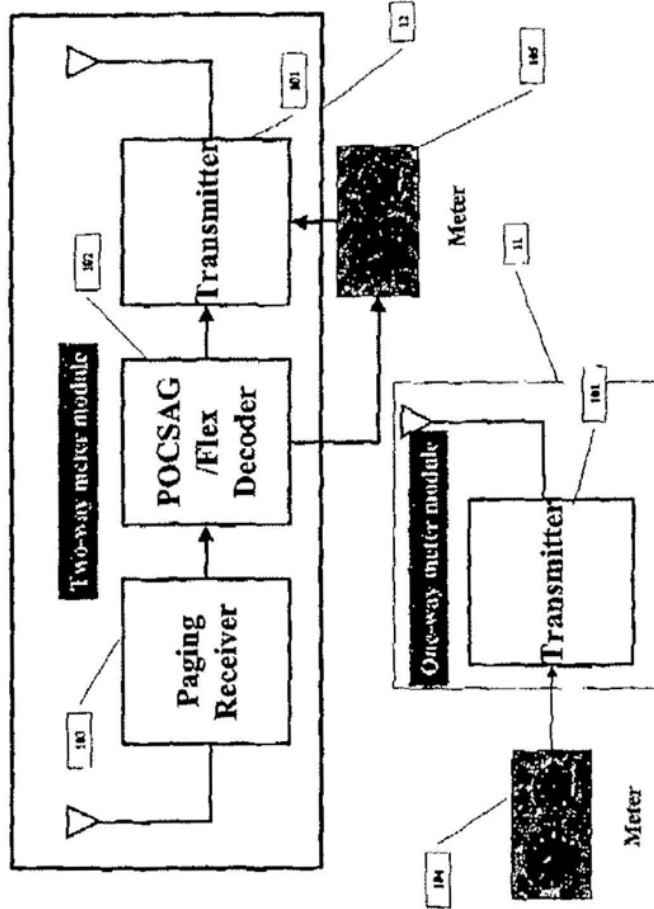
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<p>Claim 1</p> <p>a set of local subscriber transceiver units including low power mobile units located within said local</p>	<p>Sensus FlexNet and compatible equipment</p> <p>geographic area, without any other change in the network or the meter modules, will in itself increase overall network capacity.”²³</p> <p>Additional information disclosing this claim element can be found in “Sensus FlexNet Annual Maintenance Agreement AMR-454-R2,” (EON-SENS 000001-2); “FlexNet Network Portal – FNP AMI-460,” (EON-SENS 000003); “Model 510X Non-Pit Set AMR 326-R5,” (EON-SENS 000004); “Model 520X - Pit Set AMR 327-R4,” (EON-SENS 000005); “regional Network Interface AMI-420,” (EON-SENS 000006); “Tower Gateway Base Station AMR 452-R1,” (EON-SENS 000007); “FlexNet System Specifications AMR-456-R1,” (EON-SENS 000008-9); “FlexNet Technology Overview,” (EON-SENS 000010-13); “FlexNet System,” (EON-SENS 000014-21); “Technical Report,” (EON-SENS 000022); “FlexNet with AMDS Connect Promises Increased Productivity,” (EON-SENS 000023-24); “Advanced Metering Data Systems,” (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the “530 Patent”) and U.S. Patent 7,012,546 (the “546 Patent”), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p> <p>“A two-way meter module is capable of transmitting metering data air messages on demand (upon receiving an appropriate wireless command) and may also be conveniently programmed to transmit at specific times by maintaining a real-time clock synchronized by the wireless downlink channel. Two-way meter modules also receive,</p>

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<p>Claim 1</p> <p>base station geographic area, each of said local subscriber transceiver units adapted to communicate with said local base station repeater cell means by way of digital data signals of variable lengths synchronously related to a base station broadcast signal and timed for multiplexed message transmission.</p>	<p>Sensus FlexNet and compatible equipment</p> <p>decode and execute other commands such as: programming meter parameters, displaying messages or alerts on the meter's display, disconnecting and reconnecting power to the utility meter's load. FIG. 2 depicts a block diagram of a particular embodiment of a two-way meter module, in which the elements added to a one-way meter module (transmitter described herein), in order to produce a two-way meter module, include a paging receiver and decoder. The basic transmitter apparatus is described further in detail separately below.²⁴</p> <p>"USA Mobility, Inc. announced that it has entered into an alliance with Advanced Metering Data Systems, LLC and Sensus Metering Systems to provide utility meter monitoring services over a two-way narrowband personal communications services (NPCS) network. Under the agreement, the Company will sell one of its NPCS licenses to Advanced Metering Data Systems for \$1.5 million and the opportunity to receive an additional \$3.5 million in future royalty payments based upon a percentage of the monitoring revenues derived from Advanced Metering Data's use of the NPCS license. The Company also will receive a right to acquire a future equity interest in AMDS. Additionally, USA Mobility will provide Advanced Metering Data Systems with ongoing network services, including turnkey system build-out, maintenance, repair and central monitoring. The agreement also provides Advanced Metering Data Systems with access to the Company's tower locations throughout North America where the AMR fixed network receivers will be installed."²⁵</p> <p>"Sensus FlexNet SmartPoint model 520X is a pit set radio signal device which permits off site meter reading via licensed radio signal in a pit set or vault environment. The model 520 is designed to maximize performance in an RF environment. In order to achieve maximum performance, the model 520 must be installed through the pit lid. The FlexNet SmartPoint interfaces with any compatible absolute encoder equipped utility meter and operates in conjunction with a Sensus FlexNet system. The Sensus FlexNet System eliminates a number of meter reading problems such as lockouts, curbside reading estimates, estimated bills and errors associated with manual meter reading methods. The FlexNet SmartPoint is available in one and two port models. This feature provides enhanced cost effective AMI where multiple meter installations</p>

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Claim 1	<p data-bbox="235 525 267 1071">Sensus FlexNet and compatible equipment exist.”²⁶</p>  <p data-bbox="1096 273 1177 1354">“In a particular embodiment, the transmitted power is one watt, for a duration of 150 msec and with a recharge time of 90 seconds.”²⁷</p> <p data-bbox="1209 294 1315 1354">“The transmitted message is illustrated in FIG. 7 as including a message header 94 which includes the identification (ID) of the meter module which has calculated the data, and then includes the data itself, as indicated at 96.”²⁸</p>

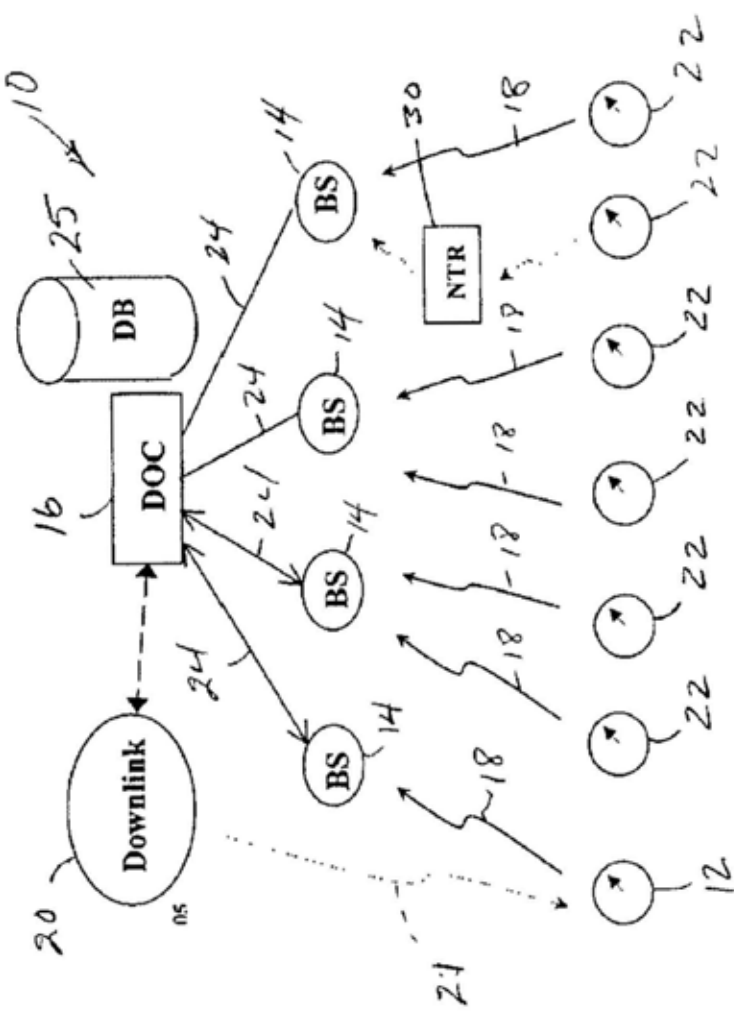
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Claim Language	Accused System
Claim 1	<div data-bbox="227 525 267 1071">Sensus FlexNet and compatible equipment</div> <div data-bbox="284 378 649 1323"><p>MESSAGE FORMAT:</p><p>96 ↓</p><p>HEADER (40 BITS)</p><p>96 ↓</p><p>INTERVAL DATA (112 BITS)</p><p>MESSAGE TYPE (INTERVAL DATA MSG)</p><p>METER MODULE ID</p><p>CHECKSUM</p><p>P1 P2 P3 P4</p><p>16x 16-bit INTERVAL CONSUMPTION VALUES, EACH REPRESENTED BY 2 BITS</p><p>REFERENCE READING (10 BITS)</p><p>T₀-TABLE IDENTIFIER (2 BITS)</p><p>T₀ T₁ T₂ T₃ T₄ T₅ T₆ T₇ T₈ T₉ T₁₀ T₁₁ T₁₂ T₁₃ T₁₄ T₁₅</p></div> <p>FIG 7</p> <p>“In order to provide a high level of redundancy of interval consumption data, another data encoding method is provided, referred to as interval consumption data “interleaving air message encoding”, which splits interval consumption values between separate messages. In a particular embodiment, depicted graphically in FIGS. 9A 9C, and in FIG. 11, three separate interval consumption data air messages 130, 132 and 134, are transmitted that relate to the same consumption period b-a. The first air message includes samples taken at times a, a+x, a+2x, . . . and is transmitted at time b. The second air message includes samples taken at times a+x/3, a+4x/3, a+7x/3, . . . b+x/3, and is transmitted at time b+x/3. The third air message includes samples taken at times a+2x/3, a+5.times./3, a+8.times./3, b+2.times./3, and is transmitted at time b+2x/3, as illustrated at block 136 in FIG. 11. More generally, in order to spread transmissions during the day, the offset between interval data arrays may be x/3+Nx, where N is an integer.”²⁹</p> <p>“The FlexNet system fully supports the download of new, executable software to all elements of the network including the endpoints. Changes to software and set points is acknowledged and reported to the data collection system. Additionally, the current settings for all endpoints are periodically sent to the data collection system autonomously. The control system for meter executable modification is now being</p>

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Claim 1	<p>Sensus FlexNet and compatible equipment</p> <p>developed to allow for scheduling, as well as interruption and resumption of processing. As each module receives the new code it verifies that it has the complete set and if not requests the individual blocks that are missing. Once the code has been fully downloaded to the devices they are verified and marked as ready. The endpoints then await a switch over command before switching to the new set of code. The old code remains in place until the next generation of code is sent to the module."³⁰</p> <p>Additional information disclosing this claim element can be found in "Sensus FlexNet Annual Maintenance Agreement AMR-454-R2," (EON-SENS 000001-2); "FlexNet Network Portal – FNP AMI-460," (EON-SENS 000003); "Model 510X Non-Pit Set AMR 326-R5," (EON-SENS 000004); "Model 520X - Pit Set AMR 327-R4," (EON-SENS 000005); "Regional Network Interface AMI-420," (EON-SENS 000006); "Tower Gateway Base Station AMR 452-R1," (EON-SENS 000007); "FlexNet System Specifications AMR-456-R1," (EON-SENS 000008-9); "FlexNet Technology Overview," (EON-SENS 000010-13); "FlexNet System," (EON-SENS 000014-21); "Technical Report," (EON-SENS 000022); "FlexNet with AMDS Connect Promises Increased Productivity," (EON-SENS 000023-24); "Advanced Metering Data Systems," (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the "530 Patent") and U.S. Patent 7,012,546 (the "546 Patent"), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p>

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<p>Claim 2</p> <p>2. A two-way communication interactive video network system having network hub switching center means for routing communications to and from a plurality of subscriber units comprising:</p>	<p>Sensus FlexNet and compatible equipment</p> <p>"The Sensus FlexNet System is a wide area Advanced Metering Infrastructure (AMI) system that provides the ability to read water, gas and electric meters with a common AMI platform. The FlexNet system is designed around the central concepts of Simplicity, Flexibility, and Reliability. The system supports one-way radio frequency (RF) transmission for water and gas meters, and offers two-way RF functionality for electric meters, including on-demand readings, remote disconnects/reconnects, and load shedding."³¹</p>  <p>"The network also includes a Data Operations Center (DOC) that communicates with</p>

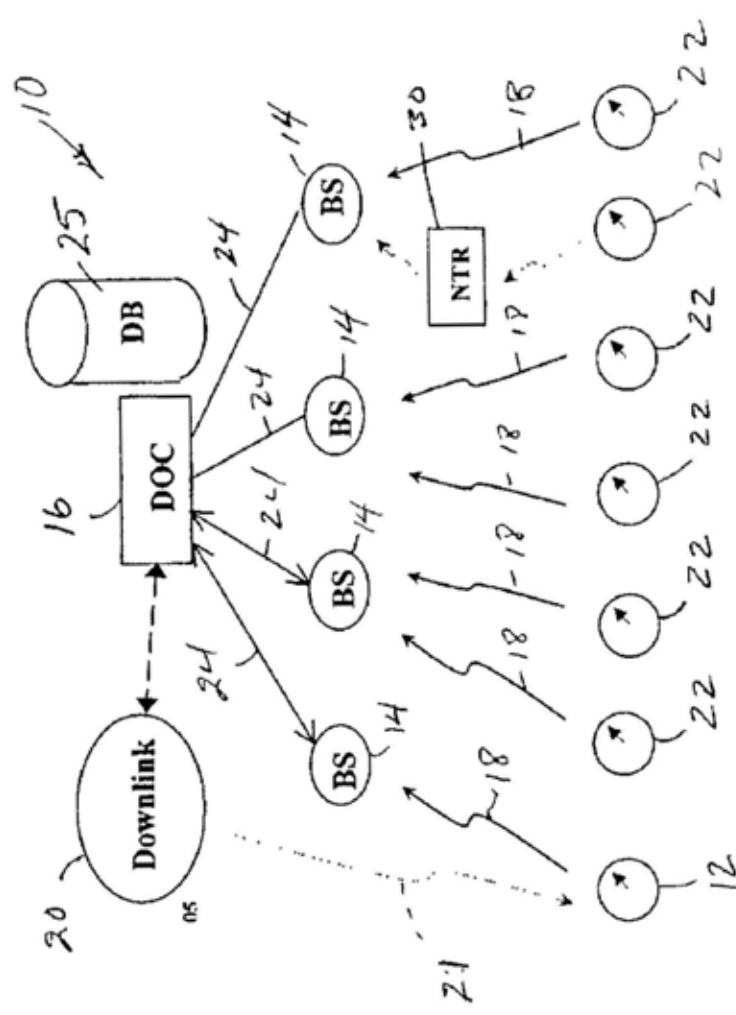
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Claim 2	<p>Sensus FlexNet and compatible equipment</p> <p>all the Base Stations, monitors their operation and collects metering data messages from them. The DOC may also be communicatively coupled to a paging network, or other wireless network, for sending downlink commands to the two-way meter modules."³²</p> <p>"USA Mobility, Inc. announced that it has entered into an alliance with Advanced Metering Data Systems, LLC and Sensus Metering Systems to provide utility meter monitoring services over a two-way narrowband personal communications services (NPSC) network. Under the agreement, the Company will sell one of its NPSC licenses to Advanced Metering Data Systems for \$1.5 million and the opportunity to receive an additional \$3.5 million in future royalty payments based upon a percentage of the monitoring revenues derived from Advanced Metering Data's use of the NPSC license. The Company also will receive a right to acquire a future equity interest in AMDS. Additionally, USA Mobility will provide Advanced Metering Data Systems with ongoing network services, including turnkey system build-out, maintenance, repair and central monitoring. The agreement also provides Advanced Metering Data Systems with access to the Company's tower locations throughout North America where the AMR fixed network receivers will be installed."³³</p> <p>"The FlexNet system's two-way features include demand reads, kWh and actual voltage, and programmable read interval, low-voltage and breaker re-closure warnings, power fail alarm, and meter functions that are accessible from the Internet. Additional benefits include remote meter disconnect/reconnect, 15-minute demand resets, real-time clock calibration for top-of-the-hour reads, TOU billing and consumption correlation, energy management programs, text and rate change notification, load shed and restore, and real-time data for management and billing. The FlexNet system also has gas and water modules for combo utility applications. "Patented AMDS Connect wireless network architecture coupled with the latest generation of Sensus iCon meters has already been demonstrated to be a winning combination in several utility operating environments, including some of the most varied and unforgiving terrains in the country," added Britton Sanderford, President and CEO of AMDS. "The FlexNet system builds on that foundation to provide the most accurate and reliable meter</p>

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Claim 2	<p>Sensus FlexNet and compatible equipment reading system available in today's electric utility industry," Sanderford concluded.^{113,14}</p> <p>"Metering data messages are collected by a network of receiver Base Stations. The reception range of each Base Station is typically over 5 miles in urban areas, allowing sparse infrastructure deployment for a wide variety of metering data collection applications."³⁵</p> <p>Additional information disclosing this claim element can be found in "Sensus FlexNet Annual Maintenance Agreement AMR-454-R2," (EON-SENS 000001-2); "FlexNet Network Portal – FNP AMI-460," (EON-SENS 000003); "Model 510X Non-Pit Set AMR 326-R5," (EON-SENS 000004); "Model 520X - Pit Set AMR 327-R4," (EON-SENS 000005); "regional Network Interface AMI-420," (EON-SENS 000006); "Tower Gateway Base Station AMR 452-R1," (EON-SENS 000007); "FlexNet System Specifications AMR-456-R1," (EON-SENS 000008-9); "FlexNet Technology Overview," (EON-SENS 000010-13); "FlexNet System," (EON-SENS 000014-21); "Technical Report," (EON-SENS 000022); "FlexNet with AMDS Connect Promises Increased Productivity," (EON-SENS 000023-24); "Advanced Metering Data Systems," (EON-SENS 000025); press releases (EON-SENS 000026-30); FlexNet Architecture description (EON-SENS 000031-41); and Sensus FlexNet FAQ (EON-SENS 000042-44), each of which are hereby incorporated by reference in their entirety.</p> <p>The FlexNet architecture and data transmission protocols include confidential and proprietary information of Sensus, AMDS, and other companies. Some information regarding the specific details of the FlexNet network and FlexNet compatible devices is not publicly available per se, but is believed to be contained at least in U.S. Patent 7,009,530 (the "530 Patent") and U.S. Patent 7,012,546 (the "546 Patent"), each of which are hereby incorporated by reference. Not all of the material disclosed in these patents may be representative of the FlexNet architecture and data transmission protocols. Plaintiff reserves the right to amend these infringement contentions based upon non-public materials produced by the Defendants, regardless of whether such non-public materials incorporate disclosure from these or any other U.S. or foreign patents or publications.</p>

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<p>Claim 2</p> <p>base station repeater cell means for communicating with a plurality of subscriber units, said base station repeater cell means and said plurality of subscriber units disposed in a respective geographic area, said base station repeater cell means further comprising:</p>	<p>Sensus FlexNet and compatible equipment</p> <p>"Each receiver Base Station 02 is able to receive and decode DSSS encoded signals (air messages) generated by the meter modules. The bandwidth of the DSSS signal is approximately 2 MHz. Base Stations 02 can be optimized to receive signals in any radio frequency range between 800 MHz and 1 GHz, including the 902 928 MHz Industrial, Scientific, and Medical (ISM) band allocated by the FCC for unlicensed use. In a preferred embodiment, the data collection network operates in the ISM band under the rules for unlicensed operation (Part 15 of the FCC Rules), and requires no licensing for any portion of its wireless uplink channel."³⁶</p>  <p>"Level 2: Space diversity is implemented to adjust network capacity, by controlling the amount of Base Stations used in order to provide coverage to specified meter</p>